Application of: Euijoon Yoon ea al.

Serial No.: 10/563,854

Amendment After RCE

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior revisions and listings of claims in the

application.

Listing of Claims:

1. (Currently amended) A growth method for growing a nitride semiconductor epitaxial

layer comprising:

a first step of growing a second nitride semiconductor epitaxial layer on a first nitride

semiconductor epitaxial layer at a first temperature;

a second step of growing a third nitride semiconductor epitaxial layer on the second

nitride semiconductor epitaxial layer at a second temperature;

a third step of releasing nitrogen from the second nitride semiconductor epitaxial layer by

collectively increasing a temperature of the first nitride semiconductor epitaxial layer, nitride

semiconductor epitaxial layer, and the third nitride semiconductor epitaxial layer within a growth

chamber,

wherein the second nitride semiconductor epitaxial layer releases nitrogen when its

temperature reaches a third temperature higher than the second temperature,

wherein each of the first nitride semiconductor epitaxial layer and third nitride

semiconductor epitaxial layer is made of a material whose equilibrium vapor pressure of nitrogen

is lower than that of the second nitride semiconductor epitaxial layer and

wherein the releasing nitrogen of the third step is made using the difference in the

equilibrium vapor pressure of nitrogen at the third temperature; and

a fourth step of growing a fourth nitride semiconductor epitaxial layer on the third nitride

semiconductor epitaxial layer after releasing nitrogen from the second nitride semiconductor

2

Application of: Euijoon Yoon ea al.

Serial No.: 10/563,854

Amendment After RCE

epitaxial layer and before separating a first part which includes the first nitride semiconductor

epitaxial layer.

Claim 2. (Cancelled)

Claim 3. (Original) The growth method of nitride semiconductor epitaxial layer of claim

1, the second nitride semiconductor epitaxial layer is converted into a metal layer in the third

step.

Claim 4. (Cancelled)

Claim 5. (Original) The growth method of nitride semiconductor epitaxial layer of claim

1, wherein the second nitride semiconductor epitaxial layer is made of InxGa1-xN (0.5 < $x \le 1$).

Claim 6. (Original) The growth method of nitride semiconductor epitaxial layer of claim

l, wherein the first and third nitride semiconductor epitaxial layers are made of $A1_xGa_{1-x}N$ (0 < x

 ≤ 1).

Claim 7. (Original) The growth method of nitride semiconductor epitaxial layer of claim

1, wherein the first temperature in the first step is in a range of 300°C to 800°C.

Claim 8. (Original) The growth method of nitride semiconductor epitaxial layer of claim

1, wherein the second temperature in the second step is in a range of 300°C to 800°C.

3

Application of: Euijoon Yoon ea al.

Serial No.: 10/563,854

Amendment After RCE

Claim 9. (Original) The growth method of nitride semiconductor epitaxial layer of claim

1, wherein the third nitride semiconductor epitaxial layer has a thickness in a range of 1 nm to

100 nm.

Claim 10. (Original) The growth method of nitride semiconductor epitaxial layer of

claim 1, wherein the third temperature in the third step is 900°C or more.

Claim 11. (Original) The growth method of nitride semiconductor epitaxial layer of

claim 1, wherein the first nitride semiconductor epitaxial layer is grown on a substrate.

Claim 12. (Original) The growth method of nitride semiconductor epitaxial layer of

claim 11, wherein the first nitride semiconductor epitaxial layer comprises a buffer layer grown

at a relatively low temperature and an un-doped GaN layer grown on the buffer layer.

Claim 13. (Original) The growth method of nitride semiconductor epitaxial layer of

claim 1, further comprising:

a step of patterning the third nitride semiconductor epitaxial layer, prior to the third step.

Claim 14. (Previously presented) The growth method of nitride semiconductor epitaxial

layer of claim 3, further comprising the step of:

separating the first part from the second part.

4

Application of: Euijoon Yoon ea al. Serial No.: 10/563,854

Serial No.: 10/563,854 Amendment After RCE

Claims 15-19. (Cancelled)